

Claims

What is claimed is:

1. A method for presenting targeted advertisements to a subscriber, the method comprising:

5 extracting probabilistic information about subscriber activities from one or more sources; and

processing the probabilistic information about subscriber activities to generate a subscriber characterization vector.

10 2. The method of claim 1, wherein the probabilistic information contains deterministic information about the subscriber.

15 3. The method of claim 2, wherein the probabilistic information contains non-deterministic information about the subscriber.

20 4. The method of claim 3, wherein said processing includes combining the deterministic information and the non-deterministic information to create the subscriber characterization vector.

5. The method of claim 1, wherein the probabilistic information is collected from one or more distributed databases.

6. The method of claim 1, wherein the probabilistic information is collected in the form of a ket vector represented by:

$$\begin{aligned} |A\rangle = & (a_1\rho_1 + a_2\rho_2 + \dots a_n\rho_n) \\ & + (b_1\sigma_1 + b_2\sigma_2 + \dots b_n\sigma_n) \\ & + (c_1\tau_1 + c_2\tau_2 + \dots c_n\tau_n) \\ & + (d_1\nu_1 + d_2\nu_2 + \dots d_n\nu_n) \\ & + (e_1\omega_1 + e_2\omega_2 + \dots e_n\omega_n) \end{aligned}$$

wherein $a_n\rho_n$ represent weighted demographic factors, $b_n\sigma_n$, represents weighted socio-economic factors, $c_n\tau_n$ represents weighted housing factors, $d_n\nu_n$ represents weighted purchase factors; and $e_n\omega_n$ represents weighted consumption factors.

7. The method of claim 6, wherein the different elements of the ket vector are stored in one or more distributed databases.

8. The method of claim 6, wherein the ket vector is normalized by a corresponding bra vector.

9. The method of claim 6, wherein the weighted demographic factor includes deterministic information.

10. The method of claim 6, wherein the weighted demographic factor includes probabilistic information.

11. The method of claim 1, further comprising utilizing the subscriber characterization vector to find a target advertisement for the subscriber.

12. The method of claim 1, further comprising forwarding the subscriber characterization vector to a secure correlation server.

13. The method of claim 12, further comprising matching the advertisements to the subscribers based on the subscriber characterization vector.

14. The method of claim 13, wherein said matching is performed by the secure correlation server.

15. The method of claim 1, wherein the subscriber activities include television viewing data.

16. The method of claim 1, wherein the subscriber activities include Internet surfing data.

17. The method of claim 1, wherein the subscriber activities include purchase transaction data.

18. A method for targeting advertisements in a privacy
5 protected manner to one or more subscribers, the method comprising:

retrieving subscriber related information in the form of a ket vector represented by:

$$\begin{aligned} |A\rangle = & (a_1\rho_1 + a_2\rho_2 + \dots a_n\rho_n) \\ & + (b_1\sigma_1 + b_2\sigma_2 + \dots b_n\sigma_n) \\ & + (c_1\tau_1 + c_2\tau_2 + \dots c_n\tau_n) \\ & + (d_1\nu_1 + d_2\nu_2 + \dots d_n\nu_n) \\ & + (e_1\omega_1 + e_2\omega_2 + \dots e_n\omega_n) \end{aligned}$$

wherein $a_n\rho_n$ represents weighted demographic factors, $b_n\sigma_n$,
15 represents weighted socio-economic factors, $c_n\tau_n$ represents weighted housing factors, $d_n\nu_n$ represents weighted purchase factors; and $e_n\omega_n$ represents weighted consumption factors; and
applying an operator to the ket vector to obtain an observable targeted marketing result.

19. The method of claim 18, further comprising presenting targeted advertisements to the subscriber by utilizing the observable result.

20. The method of claim 18, wherein said applying an operator performs a correlation operation with an advertisement characterization vector.

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21. The method of claim 18, wherein said applying an operator performs a grouping operation.

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22. The method of claim 18, wherein said applying an operator performs a targeted consumer identification function.

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23. A computer system for targeting advertisements to one or more subscribers in a privacy protected manner, the system comprising:

a plurality of distributed databases storing information about subscribers; and

a secure correlation server coupled to the distributed databases, wherein the secure correlation server retrieves the information from the distributed databases in the form of one or more ket vectors.

24. The system of claim 23, wherein the ket vector is represented by:

$$|A\rangle = (a_1\rho_1 + a_2\rho_2 + \dots a_n\rho_n)$$

$$\begin{aligned}
& + (b_1\sigma_1 + b_2\sigma_2 + \dots b_n\sigma_n) \\
& + (c_1\tau_1 + c_2\tau_2 + \dots c_n\tau_n) \\
& + (d_1\nu_1 + d_2\nu_2 + \dots d_n\nu_n) \\
& + (e_1\omega_1 + e_2\omega_2 + \dots e_n\omega_n)
\end{aligned}$$

5 wherein $a_n\sigma_n$ represents weighted demographic factors, $b_n\sigma_n$, represents weighted socio-economic factors, $c_n\tau_n$ represents weighted housing factors, $d_n\nu_n$ represents weighted purchase factors; and $e_n\omega_n$ represents weighted consumption factors.

10 25. The system of claim 23, wherein said secure correlation server applies an operator to the ket vector to obtain an observable result.

15 26. The system of claim 25, wherein said secure correlation server utilizes the observable result to present targeted advertisements to the subscribers.

20 27. The system of claim 25, wherein the operator performs a correlation operation.

28. The system of claim 25, wherein the operator performs a grouping operation.

29. The system of claim 25, wherein the operator performs a targeted consumer identification operation.